

REMARKS

Claims 1-4, 6-10, 12-24, 26 and 27 are currently pending in the subject application and are presently under consideration. Claims 1, 13, 17 and 24 have been amended herein. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Objection of Claim 1

Claim 1 is objected to because of an informality. This objection is now moot and should be withdrawn in view of the amendments to independent claim 1.

II. Objection to Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the drawing must be shown or the features cancelled from the claims. In view of the amendments to independent claims 1, 13, 17 and 24, this objection is now moot and should be withdrawn.

III. Rejection of Claims 1-14 and 17-26 Under 35 U.S.C. §102(e)

Claims 1-14 and 17-26 stand rejected under 35 U.S.C. §102(e) as being anticipated by Van Buskirk, *et al.* (US 2003/0208663 A1). This rejection should be reversed for at least the following reasons. Van Buskirk, *et al.* does not disclose all features of the subject claims.

A single prior art reference anticipates a patent claim only if it *expressly or inherently describes each and every limitation set forth in the patent claim*. *Trintec Industries, Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 63 USPQ2d 1597 (Fed. Cir. 2002); *See Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). *The identical invention must be shown in as complete detail as is contained in the ... claim*. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (emphasis added).

The claimed invention relates to on-chip placement of referencing circuitry in a multi-bit memory device. In particular, amended independent claim 1 recites an architecture that facilitates a reference voltage in a multi-bit memory, comprising a multi-bit memory core

including a plurality of data cells for storing data; *first and second reference arrays fabricated adjacent to each other and associated with one of a plurality of sectors comprising multi-bit data cells, the first and second reference arrays each comprised of a plurality of multi-bit reference cells fabricated on the memory core, wherein reference cells within the first reference array have a first voltage level and reference cells within the second reference array have a second voltage level, the second voltage level different than the first voltage level;* and a first bit value of a first reference cell of the first reference array averaged with a second bit value of a second reference cell of the second reference array to arrive at the reference voltage employed during a data cell read operation. Amended independent claims 13, 17 and 24 recite similar aspects. Van Buskirk *et al.* does not disclose such aspects of the subject claims.

Van Buskirk *et al.* relates to reading multi-bit flash memory devices. At Page 5 of the Office Action, the Examiner incorrectly asserts that the cited reference fabricates reference arrays *on the memory core*, as afforded by independent claim 1. To the contrary, the reference disposes reference arrays external to the memory core. Consequently, the cited reference further does not disclose *the first and second reference arrays each comprised of a plurality of multi-bit reference cells fabricated on the memory core, wherein reference cells within the first reference array have a first voltage level and reference cells within the second reference array have a second voltage level, the second voltage level different than the first voltage level*, as recited in the subject claim. Thus, for example, when determining dynamically the reference voltage by averaging select ones of the respective first and second reference cells, the derived reference voltage is more accurate with respect to the data bit values of the data sectors.

In view of at least the foregoing, it is readily apparent that Van Buskirk *et al.* does not teach the identical invention in as complete detail as is contained in the subject claims. Accordingly, this rejection with respect to independent claims 1, 13, 17 and 24 (and the claims that depend from) should be withdrawn.

IV. Rejection of Claim 15 Under 35 U.S.C. §103(a)

Claim 15 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Van Buskirk, *et al.* (US 2003/0208663 A1) in view of Ferrant (US 6,538,942 B2). This rejection should be withdrawn for at least the following reasons. The subject claim depends from independent claim 13. As noted above, Van Buskirk *et al.* does not disclose or suggest all

features of amended independent claim 13, and Ferrant does not compensate for the drawbacks of the primary reference. Therefore, withdrawal of this rejection is respectfully requested.

V. Rejection of Claims 16 and 27 Under 35 U.S.C. §103(a)

Claims 16 and 27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Van Buskirk, *et al.* (US 2003/0208663 A1) in view of Kurihara, *et al.* (US 6,791,880 B1).

Applicants' representative respectfully requests withdrawal of this rejection for at least the following reasons. The subject claims depend from independent claims 13 and 24. As discussed above, Van Buskirk *et al.* does not teach or suggest applicants' invention as recited in such independent claims; and Kurihara *et al.* does not make-up for the aforementioned drawbacks of the primary reference. Accordingly, this rejection should be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [SPSNP975US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,
AMIN, TUROCY & CALVIN, LLP

/Himanshu S. Amin/
Himanshu S. Amin
Reg. No. 40,894

AMIN, TUROCY & CALVIN, LLP
24TH Floor, National City Center
1900 E. 9TH Street
Cleveland, Ohio 44114
Telephone (216) 696-8730
Facsimile (216) 696-8731